

**Rocky Flats Plant Industrial Area  
Interim Measure/Interim Remedial Action  
Project Status Meeting  
December 20, 1993**

**Meeting Objectives:**

The objective of this meeting was to brief the EPA and CDH representatives, EG&G CTR, and EG&G supporting technical staff on the current status and progress of the IM/IRA project.

**Participants:**

The meeting was held in the west conference room of the EG&G Interlocken building. The following individuals attended:

<u>Name</u>	<u>Company</u>	<u>Phone Number</u>
Mark Buddy	EG&G	966-8519
Art Hirsch	Jacobs	595-8855
Farrel Hobbs	Jacobs	595-8855
Greg Weatherbee	EG&G/SWD	966-3687
Ian Paxon	EG&G/SWD	966-8783
Theresa Jehn-Dellaport	Jacobs	595-8855
Bill Fraser	EPA	294-1081
Susan Wyman	Jacobs	595-8855
Frank J. Blaha	Wright Water Eng.	480-1700
Wayne Belcher	EG&G/Geosci.	966-6931
Bruce Jones	Jacobs	595-8855
Tim Lovseth	EG&G	966-8706
Warner Reeser	Jacobs	595-8855
Joyce Miyagishima	Jacobs	595-8855
Don Beaver	Jacobs	595-8855
Michael Johnson	Jacobs	595-8855
Kristin Kerrigan	Jacobs	595-8855
Kitty Woldow	EPM/SWD	966-2299
Mary Lee Hogg	ICF/Kaiser	980-2016
Dave Norbury	CDH	692-3415
Bob Nininger	EG&G/EPM-AQD	966-3941

**Summary of Discussions:**

Mark Buddy opened the meeting at 2:05 pm. The meeting agenda is attached.

Art Hirsch reiterated the following IM/IRA objectives and scope of work (attached):

- Provide a safety net around the Industrial Area to monitor for, protect against and respond to releases of contaminants which may occur now and during D&D.
- Assess the ability of the current Industrial Area monitoring program to detect potential releases at or within the boundaries of the Industrial Area.
- Recommend pathway protection procedures and conceptualize a verification monitoring program to detect potential releases at or within the boundaries of the Industrial Area.

#### **Technical Status/Progress Reports:**

##### **Engineering**

Bruce Jones displayed maps that Jacobs has prepared of the building footing and foundation drains. He mentioned that it is necessary to know the volume and chemical character of incidental water to determine which treatment systems are appropriate.

Two site walks were conducted to determine the locations of drain, flow paths, and sampling stations.

##### **Surface Water**

Frank Blaha reported that the status of the surface water evaluation is similar to that of the November 23 meeting. Recommendations are to routinely sample at the six main basins and to initiate subbasin monitoring during D&D activities.

Two additional issues have been identified since the last performance status meeting: (1) the need to quantify base flow and storm water flow at monitoring stations, and (2) the need to consider the sewage treatment plant (STP) as a potential contaminant flow path.

Influent monitoring and toxicity testing at the STP are adequately addressed. The capability exists for one-day storage of water for chemical assessment before treatment. The STP must still be treated as a potential contaminant pathway. Changes are being made to the STP influent standards. As a result, the required monitoring program will likely change, and additional outfall sampling points may be identified.

The IM/IRA report will identify which subbasin and main basin each footing drain or outfall occupies. The flowpath drawings will be similar to those in the Master Drainage Plan. Schematic drawings will show the footing drain/surface water flowpaths at a glance.

Bill Fraser (EPA) stated that three programs must be compatible: the ponds IM/IRA, the new NPDES permit, and the Industrial Area IM/IRA. Mr. Blaha recognized the

similarities between the ponds IM/IRA and the Industrial Area IM/IRA. It was agreed that the documents should "match up" and not be in conflict.

### Hydrogeology

Theresa Jehn-Dellaport reviewed the approach of the hydrogeology team (attached).

- Source chemicals have been identified, including documented under-building contamination. EG&G is attempting to provide the results from recent sampling of monitoring wells in the Industrial Area, for incorporation into the IM/IRA.
- Flow paths are being evaluated based on high and low water table conditions, cultural features (building foundations and drains), bedrock elevations, sandstone paleochannels, and surface springs and seeps.
- Data gaps are being determined by a spatially comparing potential sources and flow paths to existing monitoring wells.
- Recommendations are being developed.

The end products will include recommendations for the (1) location of proposed monitoring wells, (2) screened interval of proposed monitoring wells, (3) analyte list, (4) sampling frequency, and (5) use of existing monitoring wells. Maps will be produced showing (1) groundwater flow (at high and low water table) and (2) existing and proposed new monitoring well locations. Maps of contaminant plumes will be developed, based on recent Industrial Area monitoring well sampling results, if that information is received in time.

The locations of recommended wells will be field-checked by site walks. Greg Weatherby suggested contacting Ralph Lindberg, at SMS, regarding contaminant plume maps.

### Air Pathway

Warner Reeser reported that the air team was initially challenged by the large amount of air quality data available. With Bob Crocker's help, the air team has been able to assimilate most of the information. An overhead of recent activities (attached) was presented. These activities include the following:

- continued review of RFP air monitoring and meteorology programs;
- summarized existing programs;
- summarized RFP dispersion model applications to date;
- drafted pathways analysis;
- initiated evaluation of programs and data gap identification; and
- Began developing recommendations.

Potential data gaps have been identified, and initial recommendations have been made. No VOC monitoring for air exists within the Industrial Area, although CDH does limited monitoring for VOCs in air. No data gaps have been identified in the existing meteorological monitoring, although additional needs may exist during D&D. Mark Buddy asked what would be the benefits of VOC monitoring. Warner Reeser replied that VOC emissions could occur during D&D; for example, off-gassing could occur from soils during building demolition. VOCs were discounted in the past because no regulatory requirements for VOC monitoring existed. This situation may change with the new Clean Air Act and subsequent new state regulations.

Mark Buddy pointed out that the RFP air program is being reevaluated and asked whether the IM/IRA conclusions will be consistent with the new evaluation.

### COPC Identification

Joyce Miyagishima presented a chart (attached) showing the organization of chemicals of potential concern (COPCs) and chemicals of interest (COIs). The COPCs have been identified from past releases and the target compound list (TCL) obtained from Rick Roberts. The COIs could be released by unplanned events (e.g. spills) and have been identified from chemical product inventories and chemical waste streams. The lists of COPCs and COIs are very large. A risk analysis to pare down the contaminant list will not be performed.

### Conceptual Site Model

Kristin Kerrigan provided handouts (attached) listing the resources available for the development of a conceptual site model (CSM). Several examples of CSMs were presented, and the components of a CSM were listed. The IM/IRA will look at contaminant sources, release mechanisms, and transport media, but will not address exposure routes and receptors. The approach will involve combining OU-specific CSMs into a general CSM for the Industrial Area.

Three scenarios will be developed: current conditions, potential unplanned events, and future nonroutine activities, including D&D. For the purpose of this IM/IRA, unplanned events will include leaks, spills, or overflows. Catastrophic events such as fires, explosions, earthquakes, tornadoes, floods, etc. will not be evaluated as unplanned events. The nonroutine activities scenario will evaluate expected releases during remediation (excavation) and unplanned releases (leaks, spills, or overflows).

Mark Buddy stated that nonroutine activities will be discussed generally in the text. Triggers, actions, references to existing emergency response (ER), and possibly ER recommendations for D&D will be included. Work control packages should be addressed for D&D activities. The Operational Review Committee (ORC) oversees all work being done and determines whether the work falls within an acceptable safety envelope.

Ian Paton said that the EG&G Surface Water Division is putting together flow charts for ER. These may be useful to the IM/IRA.

#### Baseline Determination/Action Outline

Farrel Hobbs described the objectives and approach for determining baseline and action levels (attached). The IM/IRA objective is to monitor, detect, and respond to releases from D&D activities. Monitoring will be done to provide verification of contaminants and to detect acute and chronic releases. Corrective action will be taken when levels exceed an established baseline.

The general approach for the IM/IRA during D&D activities is to (1) determine activity-specific contaminants of concern (COCs), (2) evaluate risks for COCs, (3) identify potential release pathways, (4) assess real-time detection technologies for acute releases, (5) establish a sampling plan to detect chronic releases, (6) place stations and operate to establish a baseline, (7) establish action levels and link to emergency response, and (8) perform ongoing monitoring. Baseline contaminant levels must be established to determine elevated concentrations that warrant ER. Action levels will likely be activity-, location-, and contaminant-specific.

#### Schedule and Outline Reports

Art Hirsch distributed a Document Outline (attached) to CDH, EPA, and the EG&G technical support team. Mark Buddy distributed a preliminary drafts of Section 2.0 through 2.3, 4.1, 5.1, 6.1, and 8.1 through 8.3. The second preliminary draft will be delivered to EG&G by January 3. EG&G will give copies (with written corrections/comments) to the regulatory agencies January 10, approximately.

Meetings between Jacobs and EG&G technical personnel will be held during January 4 to 7. Surface water personnel will tentatively meet on January 5, groundwater and air on January 6, and COPC and soil on January 7.

Art Hirsch distributed and discussed the schedule of activities (attached). Data gathering was done by December 10. Pathways analysis is complete for most media. Monitoring assessment will be done by December 30. Technical write-ups will be completed by January 14 and the preliminary draft will be submitted to EG&G at a February 1 meeting. EG&G will have two days to comment. Those comments will be incorporated into a draft final document to be delivered to EG&G by February 15. The document will undergo public comment. Distribution of the final IM/IRA/DD is slated for August 30, 1994.

Mark Buddy reported that the modification to the scope of work may add some time to portions of the schedule but should not change the ultimate deadlines.

## Final Meeting Comments

Ian Paton asked whether the future CSM, in Section 11.0, will include recommendations for monitoring. Art Hirsch replied "yes." The future CSM will be in a cartoon format similar to the current CSM format. Conceptual verification monitoring recommendations will be provided for the IM/IRA project. Section 9.0 will cover current activities and Section 11.0 will discuss the future CSM, with recommendations.

Mark Buddy said that he wanted to get the outline approved before the Christmas shutdown, but has not received DOE comments.

Bill Fraser expressed concern about the need for a separate chapter on D&D. With this format, D&D may appear as an afterthought, rather than the major focus of the IM/IRA. Mr. Fraser suggested including D&D recommendations in the sections specific to each pathway.

The distinction between nonroutine vs. catastrophic events was also questioned. Bill Fraser stated that the IM/IRA proposes to deal with spills, but ignore fires. These events are divided by a fine line. Perhaps earthquakes and other "acts of God" may be ignored, but the IM/IRA should address fires, given past scenarios and public perception.

Dave Norbury questioned whether Section 2.3, Existing Monitoring Activities, will be a duplicate of other sections. Art Hirsch replied that the section is introductory, rather than repetitive.

The separation of footing drain water from groundwater and surface water was questioned. Art Hirsch stated that the footing drain water is treated separately because it is managed differently at RFP.

Dave Norbury pointed out that we may want to identify medium-specific sources within the section for each medium, rather than as a separate section.

Bill Fraser stated that, in developing recommendations, it is important to look at what we have, what we need, and *what we don't need*. It is best not to waste money on data that are redundant or will not be used.

## Action Items

- Meetings will be held between EG&G and Jacobs technical disciplines during the week of February 4 to 7.
- Tim Lovseth will determine the status of the recent monitoring well sampling data and convey that information to Jacobs.
- The next biweekly meeting will be held February 1 at EG&G and may last half a day.

- The locations of recommended wells will be field-checked by site walks.
- Jacobs will contact Ralph Lindberg regarding contaminant plume maps.

IM/IRA PERFORMANCE MEETING AGENDA  
20 DECEMBER 1993 2:00-4:00PM  
EG&G INTERLOCKEN FACILITIES

INTRODUCTIONS/OBJECTIVES

M. BUDDY/A. HIRSCH

TECHNICAL PRESENTATIONS

SURFACE WATER

F. BLAHA

INCIDENTAL WATER MANAGEMENT

B. JONES

HYDROGEOLOGY

T. JEHN-DELLAPORT

AIR

W. REESER

CHEMICALS OF CONCERN

J. MIYAGISHIMA

CONCEPTUAL SITE MODELS

K. KERRIGAN

D&D BASELINE/ACTION CRITERIA

F. HOBBS

IM/IRA DOCUMENT OUTLINE

A. HIRSCH

PROJECT SCHEDULE

A. HIRSCH

CLOSING REMARKS

M. BUDDY



## IM/IRA Project Objectives

To provide a safety net around the IA to monitor for, protect against and respond to releases of contaminants which may occur now and during D&D.

To assess the current Industrial Area monitoring program in the ability to detect potential releases at or within the boundaries of the industrial area.

To recommend pathway protection procedures and conceptualize a verification monitoring program and for future D&D activities to detect potential releases at or within the boundaries of the Industrial area.

### Scope of Work

1. To develop an Implementation Plan
2. Develop Data Gathering Objectives and acquire technical information
3. Create a list of chemicals of concern and identify past and potential source areas.
4. Understand and define contaminate pathways; develop a site conceptual models
5. Define foundation drain influence on groundwater flow migration
6. Review and provide recommendations to the Incidental Water Management Plans
7. Receive and assess current on site water treatment capabilities for incidental waters.
8. Assess current monitoring programs effectiveness relative to the IA boundaries.
9. Conceptualize a monitoring verification program for D&D activities.
10. Evaluation of best available monitoring technologies; includes the applicability and feasibility of real time monitoring.
11. Provide a programmatic linkage between pathway protection, D&D monitoring, emergency response (actual releases) or source investigations (chronic release).
12. Develop an IM/IRA Decision Document

# **Groundwater Monitoring Assessment**

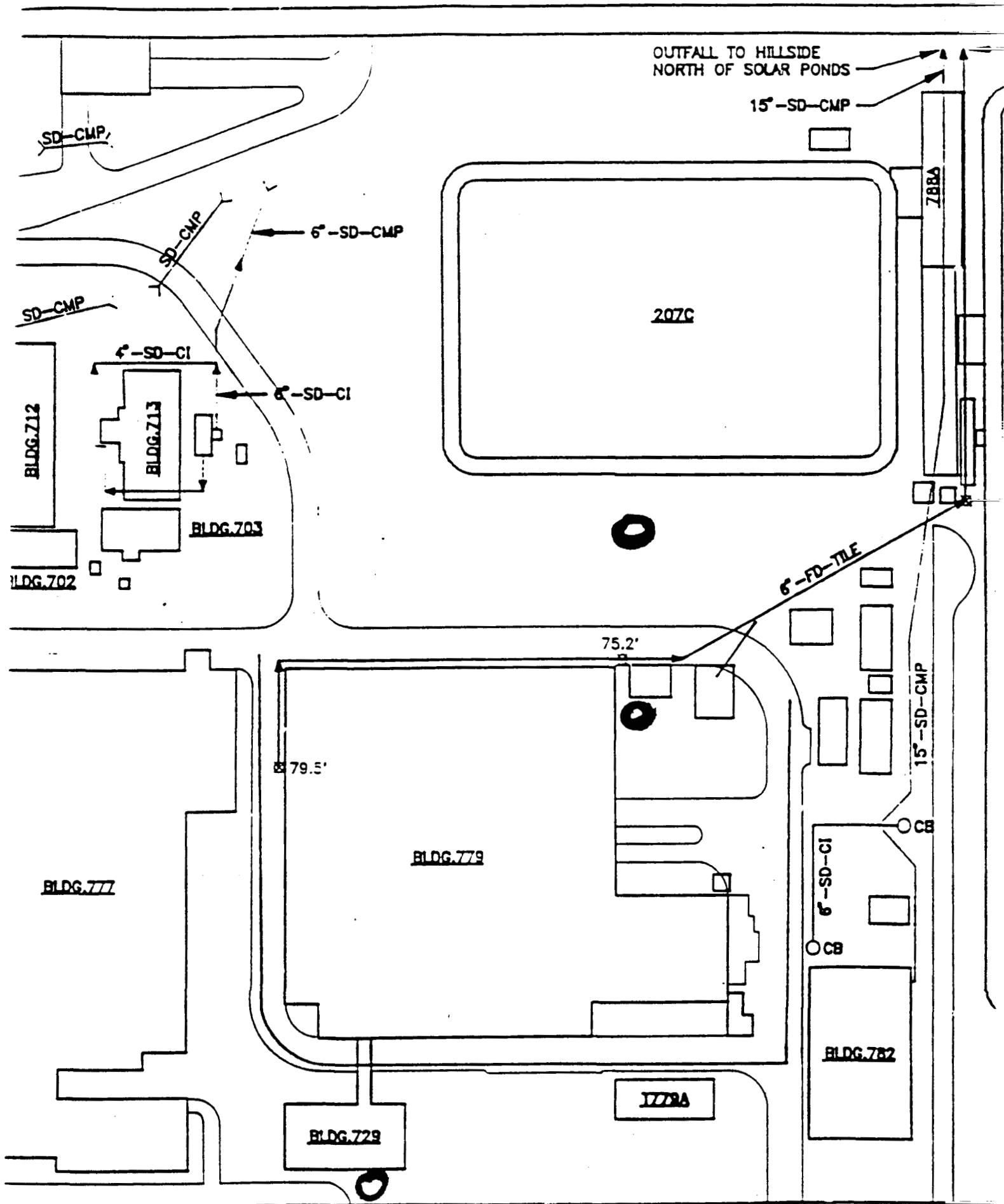
## **END PRODUCTS**

### **Recommendations for:**

- \* Location of proposed monitoring wells
- \* Screened interval of proposed monitoring wells
- \* Analyte list
- \* Sampling frequency
- \* Use of existing monitoring wells

### **Maps:**

- \* Groundwater flow, high water table
- \* Groundwater flow, low water table
- \* Existing and proposed new monitoring well locations
- \* Contaminant plumes, based on recent IA monitoring well sampling results.



# **Groundwater Monitoring Assessment**

## **APPROACH**

### **IDENTIFY SOURCES/CHEMICALS**

- \* Chemicals from historical releases, including documented under-building contamination
- \* Chemical inventories
- \* Chemical waste streams and waste storage
- \* Recent IA monitoring well sampling results\*

### **EVALUATE FLOWPATHS** based on

- \* high and low water table conditions
- \* cultural features (building foundations and drains)
- \* bedrock elevations
- \* sandstone paleochannels
- \* surface seeps and springs

### **DETERMINE DATA GAPS**

- \* spatial comparison of potential sources and flow paths to existing monitoring wells

### **MAKE RECOMMENDATIONS**

**IM/IRA**  
**AIR MONITORING AND METEOROLOGY**

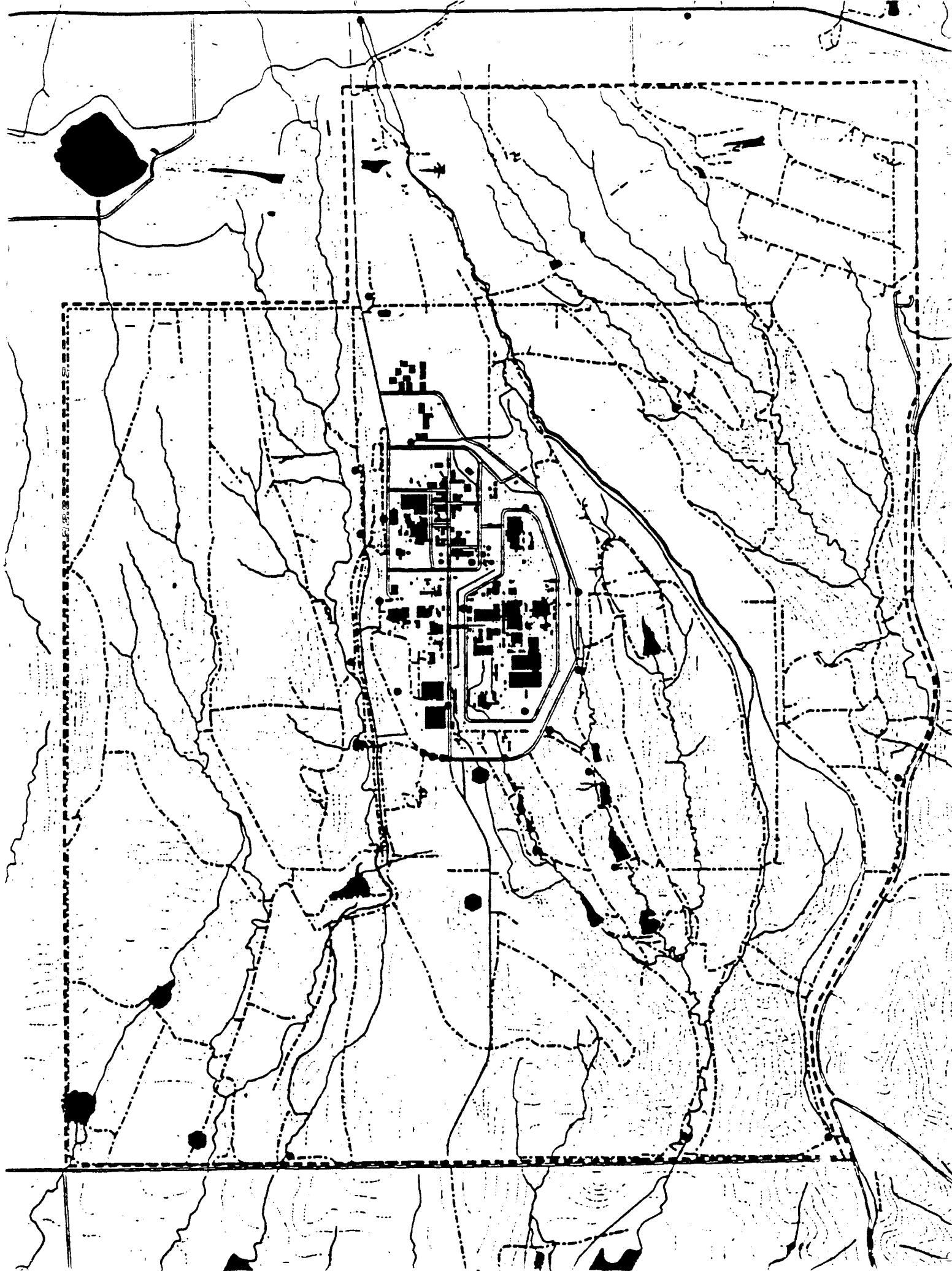
**Recent Activities**

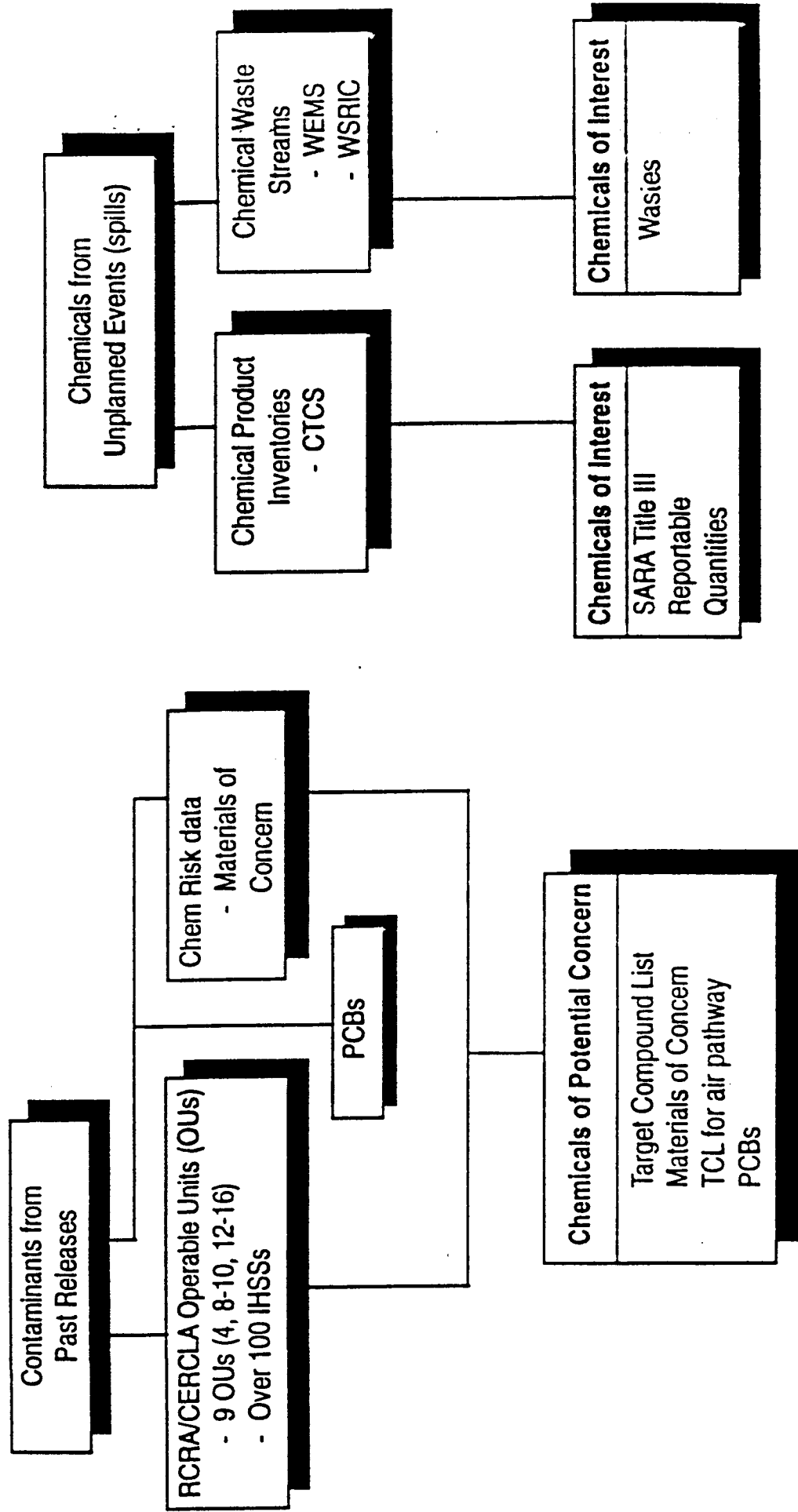
- Continued review of RFP air monitoring and meteorology programs
- Summarized existing programs
- Summarized RFP dispersion model applications to date
- Drafted pathways analysis
- Initiated evaluation of programs and data gap identification
- Began developing recommendations

**IM/IRA**  
**AIR MONITORING AND METEOROLOGY**

**Potential Data Gaps Identified**

- No volatile organic compound (VOC) monitoring within Industrial Area (IA)
- Existing CDH-operated VOC samplers provide limited coverage of VOC emissions from the IA
- Baseline VOC concentrations for RFP do not exist





## Contaminants of Potential Concern and Chemicals of Interest



## Resources

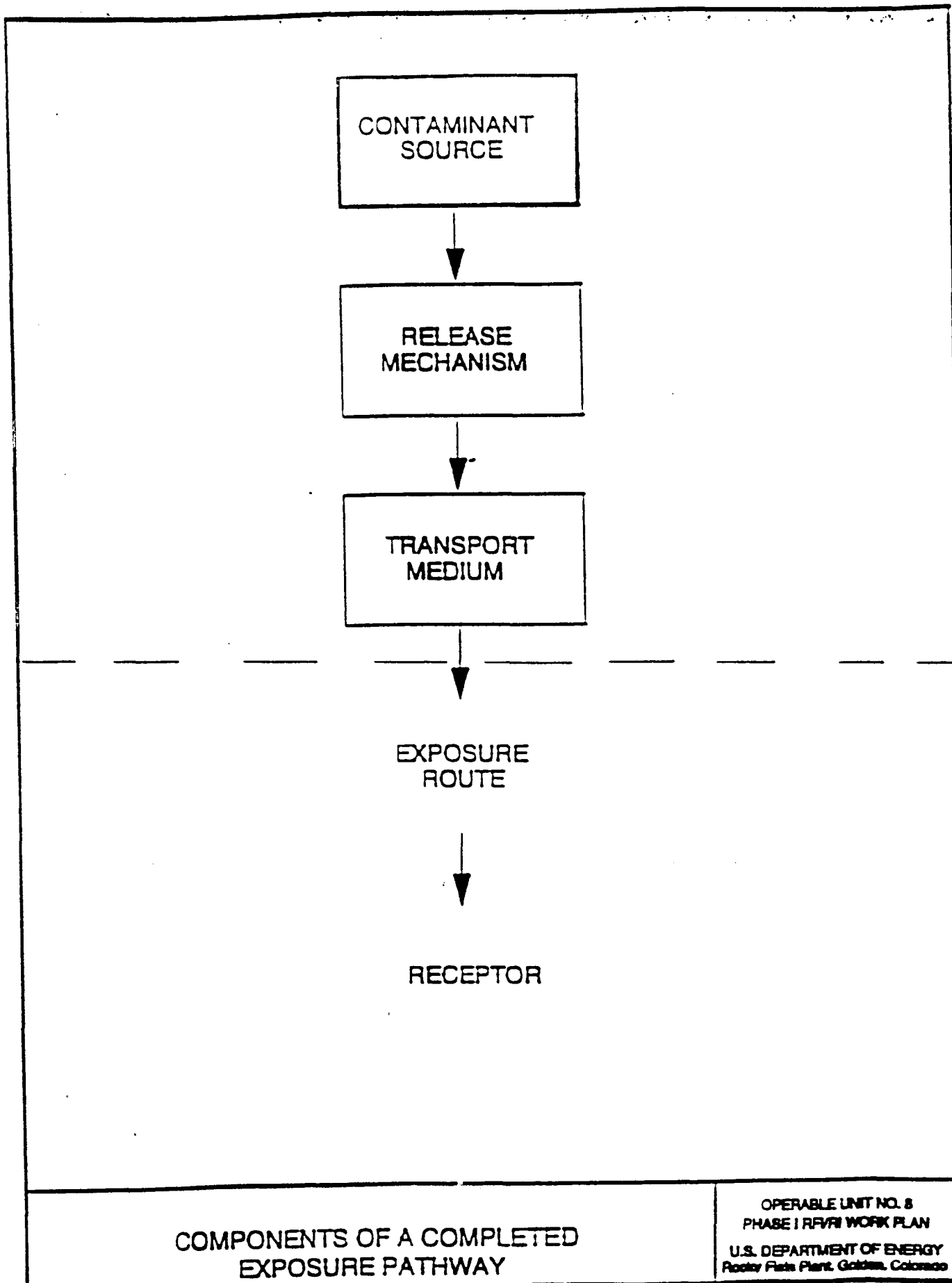
Transport Media Write-ups (earlier sections of report)

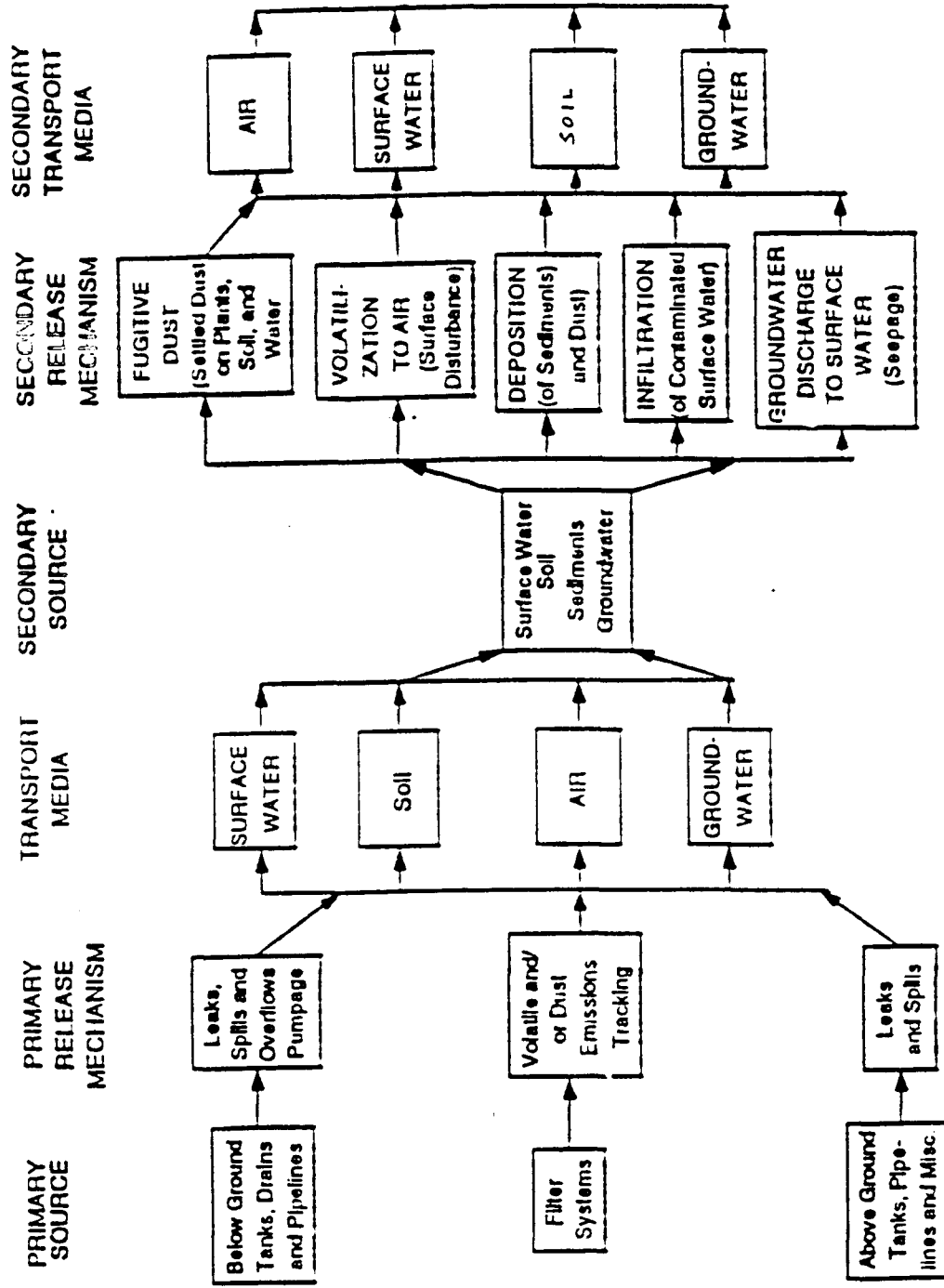
OU-Specific CSMs from Phase I RFI/RI Work Plans (9 OUs in IA)

Flow Diagrams

Graphics

Text

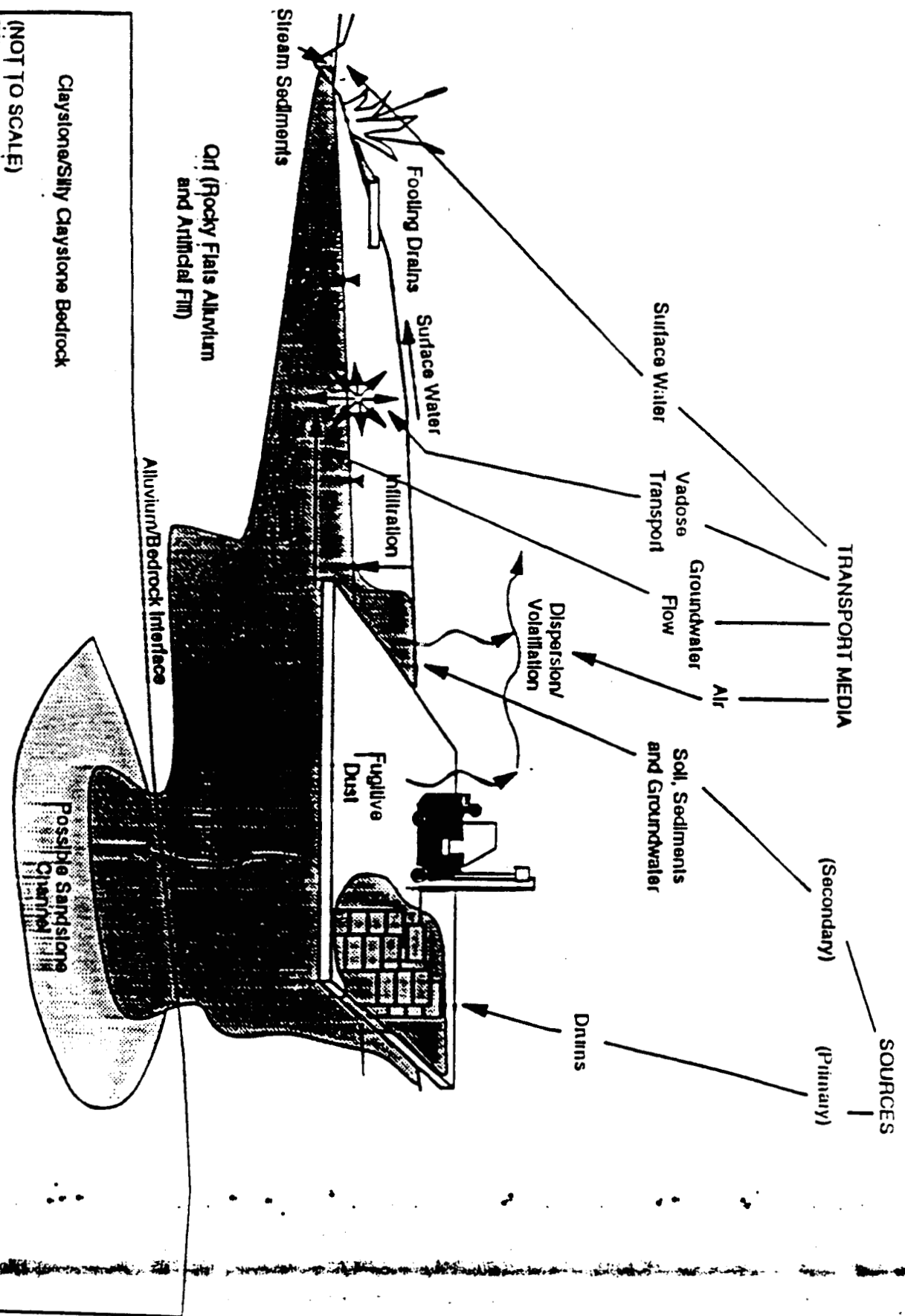




# CONCEPTUAL MODEL FLOW CHART

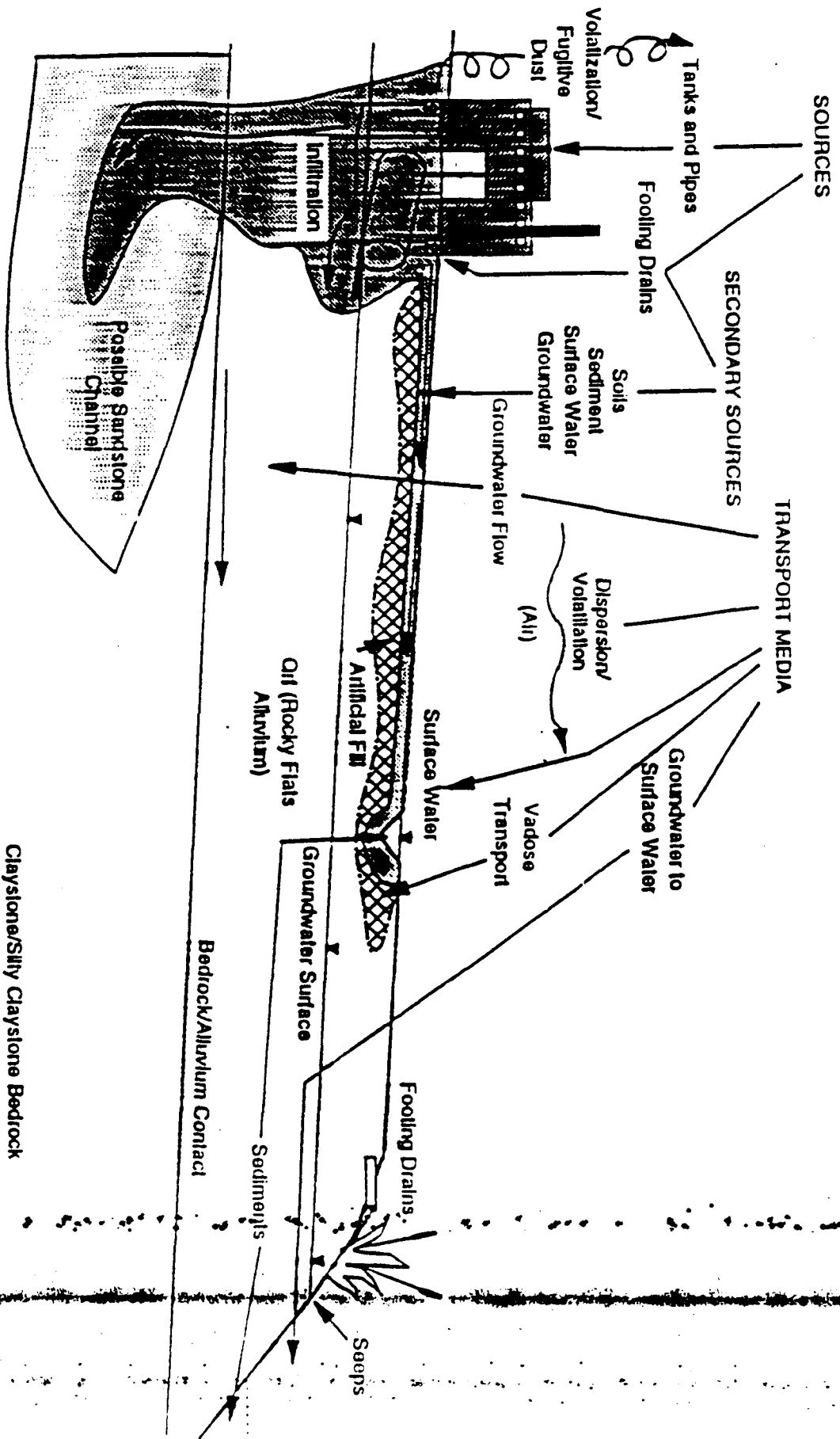
## Components of Conceptual Site Model (CSM)

1. Primary Sources  
general groupings of IHSSs according to source type
2. Primary Release Mechanisms  
source-specific; may be duplicative for some sources
3. Transport Media  
soil  
air  
surface water  
groundwater
4. Secondary Sources  
soil  
surface water  
sediment  
groundwater
5. Secondary Release Mechanisms  
contaminant leaching from soil  
runoff  
erosion  
fugitive dust emissions  
volatile emissions  
airborne deposition  
infiltration/percolation  
groundwater seeps
6. Secondary Transport Media  
soil  
surface water  
sediment  
groundwater  
air



# CONCEPTUAL MODEL

OPERABLE UNIT NO. 8  
 PHASE I/II/III WORK UNIT  
 U.S. DEPARTMENT OF ENERGY  
 Rocky Flats Plant, Golden, Colorado



(NOT TO SCALE)

# CONCEPTUAL MODEL

## Preliminary Approach

### to Development of Conceptual Site Model (CSM)

1. Combine OU-specific CSMs into a general CSM for the Industrial Area.
2. Examine three scenarios:
  - Current or Actual Conditions;
  - Potential Unplanned Events; and
  - Non-Routine Activities (future remediation and D&D).
3. Each scenario will include examination of primary and secondary sources, associated release mechanisms, and transport media.
4. Examine potential contaminant transport pathways only. Exposure pathways and receptors will not be included in the CSM.
5. The current scenario will include consideration of historical releases at the IHSSs such as:
  - Past spills, leaks, or overflows;
  - Historical waste disposal sites;
  - Past fire locations or decontamination areas;
  - Former storage areas; etc.
6. The unplanned events scenario will evaluate potential releases from accidents under current conditions such as:
  - Spills;
  - Leaks; or
  - Overflows.

Catastrophic events such as fires, explosions, earthquakes, tornadoes, floods, etc. will not be evaluated as an unplanned event.
7. The non-routine activities scenario will evaluate expected releases during remediation (excavation). Unplanned releases to be evaluated under this scenario will be consistent with the current scenario (spills, leaks, or overflows). Other unplanned releases are assumed to be controlled by engineering safety controls.
8. Emergency response to unplanned events will be discussed in text.

## **BASLINE DETERMINATION/ACTION OUTLINE**

- Objective: Monitor, detect, and respond to contaminant releases from D&D activities.
  - Monitor to provide verification
  - Detect acute and chronic releases
  - Corrective action when levels exceed baseline
  
- General Approach:
  - Determine activity-specific contaminants of concern
  - Evaluate risks for COCs
  - Identify potential release pathways
  - Assess real time detection technology (acute)
  - Establish sampling plan (chronic)
  - Placement of stations/operate to establish baseline
  - Establish action levels/linkage to emergency response
  - Perform on-going monitoring



December 16, 1993

## **EXECUTIVE SUMMARY**

### **1.0 INTRODUCTION**

#### **1.1 Objectives**

#### **1.2 Scope**

#### **1.3 Project Background**

### **2.0 SITE HISTORY AND CHARACTERIZATION**

#### **2.1 Site Description**

##### **2.1.1 Location**

##### **2.1.2 Description of Industrial Area**

##### **2.1.3 History**

#### **2.2 Physical Setting**

##### **2.2.1 Topography**

##### **2.2.2 Surface Water Hydrology**

##### **2.2.3 Regional Geology**

##### **2.2.4 Site Geology**

##### **2.2.5 Regional Hydrogeology**

##### **2.2.6 Site Hydrogeology**

##### **2.2.7 Meteorology**

##### **2.2.8 Ecology**

##### **2.2.9 Sensitive Environments**

##### **2.2.10 Cultural Influences**

#### **2.3 Existing Monitoring Activities**

##### **2.3.1 Objectives for Environmental Monitoring**

##### **2.3.2 Summary of Current Monitoring Programs**

##### **2.3.3 Overview of Data Reviewed**

#### **2.4 Monitoring for Unplanned Events**

### **3.0 POTENTIAL CONTAMINANTS OF CONCERN, CHEMICALS OF INTEREST, AND SOURCES**

#### **3.1 Approach**

#### **3.2 Description of Data Reviewed**

### 3.3 Findings

## 4.0 GROUNDWATER MONITORING

### 4.1 Approach

#### 4.2 Conceptual Groundwater Flow Model

#### 4.3 Existing Monitoring Programs

#### 4.4 Summary of Available Data

#### 4.5 Pathways Analysis

#### 4.6 Evaluation of Monitoring Program and Data Gaps

#### 4.7 Monitoring Alternatives Assessment

#### 4.8 Recommendations for RFP Groundwater Monitoring Programs

## 5.0 SURFACE WATER MONITORING

### 5.1 Approach

#### 5.2 Existing Monitoring Programs

#### 5.3 Summary of Available Data

#### 5.4 Pathways Analysis

#### 5.5 Evaluation of Monitoring Program and Data Gaps

#### 5.6 Monitoring Alternatives Assessment

#### 5.7 Recommendations for Surface Water Monitoring Programs

## 6.0 SOIL MONITORING

### 6.1 Approach

#### 6.2 Existing Monitoring Programs

#### 6.3 Summary of Available Data

#### 6.4 Pathways Analysis

#### 6.5 Evaluation of Monitoring Program and Data Gaps

#### 6.6 Monitoring Alternatives Assessment

#### 6.7 Recommendations for Monitoring Programs

## 7.0 AIR MONITORING

## **7.1 Approach**

## **7.2 Existing Monitoring Programs**

## **7.3 Summary of Available Data and Dispersion Models**

## **7.4 Pathways Analysis**

## **7.5 Evaluation of Monitoring Program and Data Gaps**

## **7.6 Monitoring Alternatives Assessment**

## **7.7 Recommendations for Monitoring Programs**

# **8.0 INCIDENTAL AND FOOTING DRAIN WATERS**

## **8.1 Approach**

## **8.2 Foundations, Footing Drains, Sumps, and Valve Vaults and Similar Sources of Intercepted Groundwater**

## **8.3 Existing Management, Monitoring and Disposition Program**

## **8.4 Summary of Available Data**

## **8.5 Contaminants, Sources, and Pathways**

## **8.6 Current Water Process Capabilities and Capacities**

## **8.7 Data Gaps, Disposition, and Process Needs**

## **8.8 Recommendations for Disposition and Monitoring**

# **9.0 CONCEPTUAL SITE MODEL**

## **9.1 Contaminants of Potential Concern and Sources**

## **9.2 Pathways**

## **9.3 Relationship to Monitoring Programs**

## **9.4 Data Gaps**

## **9.5 Recommendations**

# **10.0 NON-ROUTINE ACTIVITIES MONITORING RECOMMENDATIONS**

## **10.1 Description of Non-routine Activities**

## **10.2 Conceptual Monitoring Approach**

## **10.3 Pathway Protection**

## **10.4 Alternative Analysis**

## **10.5 Verification Monitoring Recommendations**

### **10.6 Action Levels**

#### **10.6.1 Emergency Response**

#### **10.6.2 Source Investigation**

## **11.0 FUTURE CONCEPTUAL SITE MODEL**

## **12.0 SUMMARY CONCLUSIONS AND RECOMMENDATIONS**

## **13.0 REFERENCES**

ACTIVITY ID	ACTIVITY DESCRIPTION	ORIG DUE	EARLY START	EARLY FINISH	1993												1994															
					SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
01000-10	Task 01 Develop Draft IP		10	40C193																												
01000-20	Task 01 Incorporate Comments/Finalize		13	180C193																												
02000-10	Task 02 Develop Initial DCOs		3	50C193																												
02000-20	Task 02 Acquire & Technical Information		33	80C193																												
02000-30	Task 02 Acquire Site Char. Info/EGG		33	80C193																												
02000-40	Task 02 Assess Final DCO's		2	240C193																												
02000-50	Task 2-Acquire Review Final Technical Info		9	300C193																												
03000-10	Task 03 Develop Chemical Source Info		33	80C193																												
03000-20	Task 03 Conduct Data Mont. System Development		15	240C193																												
03000-30	Task 03 Conduct Qualitative Chemical Selection App		7	240C193																												
03000-40	Task 03 EGG Feedback on EOC Approach		1	70C193																												
03000-50	Task 03 Incorporate EOC Approach		7	80C193																												
03000-60	Task 03 EOC Database Finalized		1	170C193																												
04000-10	Task 04 Develop Pathway Review/Assessment		50	80C193																												
04000-20	Task 04 Develop Water Pathway Review/Assessment		50	80C193																												
04000-30	Task 04 Develop Groundwater Pathway Review/Assessment		5	200C193																												
04000-40	Task 04 Develop Water Pathway Review/Assessment		47	80C193																												
04000-50	Task 04 ESM Approach Development		2	160C193																												
04000-60	Task 04 EGG Review of ESM Approach		1	200C193																												
04000-70	Task 04 Incorporate ESM Approach		3	210C193																												
04000-80	Task 04 Finalize Pathway/ESM		13	280C193																												
05000-10	Task 05 Acquire Geologic Data		32	80C193																												
05000-20	Task 05 Develop/Acquire Drain Locations/Drawings		28	80C193																												
05000-30	Task 05 Develop Prelim Map w/Local Units/Leaky Outfalls		7	170C193																												
05000-40	Task 05 Develop Prelim Map of Drain Locations		4	300C193																												
05000-50	Task 05 Develop Geologic Mapping/Underdrain Map		5	60C193																												
05000-60	Task 05 Develop Geologic Potential/EGG Map		12	230C193																												
05000-70	Task 05 Develop Groundwater Migration Flow Map		5	130C193																												
06000-10	Task 06 Develop/Review EGG Focal Points		48	40C193																												
06000-20	Task 06 Develop Monitoring Assessment		7	210C193																												
06000-30	Task 06 Develop Water Monitoring Assessment		7	210C193																												
06000-40	Task 06 Develop Groundwater Monitoring Assessment		8	200C193																												
06000-50	Task 06 Develop Water Monitoring Assessment		8	200C193																												
07000-10	Task 07 Develop/Review Initial Water Mgt. Plan		35	80C193																												
07000-20	Task 07 Develop Visitation Schedules/Drain Locations		4	300C193																												
07000-30	Task 07 Develop Water Mgt. Plan Coordination		7	60C193																												
07000-40	Task 07 Develop Finalize Guidelines		7	60C193																												

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E.G. & G. ROCKY FLATS PLANT, CO  
 IM/IRA/00  
 BASELINE-REVISED-DRAFT

DATE

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Plot Date 6/26/83 Date Rec'd 10/19/83 Project Start 2/28/84 Project Finish 3/14/84	Activity Description Capital Assets Capital Assets Miscellaneous
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ACTIVITY ID	ACTIVITY DESCRIPTION	ORIG DUR	EARLY START	EARLY FINISH	1993												1994														
					SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
17000-00	Task 17-Submit Draft Responsiveness Summary	1	21-JAN-94	21-JAN-94																											
18000-00	Task 18-Content Resolution Meeting	8	22-JAN-94	5-MAR-94																											
19000-00	Task 19-Incorporate Comments into Final IM/IRA	10	6-MAR-94	19-MAR-94																											
20000-00	Task 20-Submit Final IM/IRA/DO w/15 DOE/EEGEG	5	20-MAR-94	26-MAR-94																											
21000-00	Task 21-Submit Final IM/IRA/DO to Agencies	12	27-MAR-94	11-MAY-94																											
22000-00	Task 22-Prepare Final IM/IRA/DO Distribution	11	12-MAY-94	26-MAY-94																											
23000-00	Task 23-Distribute Final IM/IRA/DO	2	29-MAY-94	30-MAY-94																											
00000-00	Notice to Proceed	1	10-SEP-93	10-SEP-93																											
24000-00	Task 24-Project Management	231	10-SEP-93	31-AUG-94																											
24000-02	Bi-weekly Meeting #1	1	20-SEP-93	20-SEP-93																											
24000-04	Bi-weekly Meeting #2	1	28-SEP-93	28-SEP-93																											
24000-06	Bi-weekly Meeting #3	1	6-OCT-93	6-OCT-93																											
24000-08	Bi-weekly Meeting #4	1	14-OCT-93	14-OCT-93																											
24000-10	Bi-weekly Meeting #5	1	22-OCT-93	22-OCT-93																											
24000-12	Bi-weekly Meeting #6	1	30-OCT-93	30-OCT-93																											
24000-14	Bi-weekly Meeting #7	1	7-NOV-93	7-NOV-93																											
24000-16	Bi-weekly Meeting #8	1	15-NOV-93	15-NOV-93																											
24000-18	Bi-weekly Meeting #9	1	23-NOV-93	23-NOV-93																											
24000-20	Bi-weekly Meeting #10	1	1-DEC-93	1-DEC-93																											
24000-22	Bi-weekly Meeting #11	1	9-DEC-93	9-DEC-93																											
24000-24	Bi-weekly Meeting #12	1	17-DEC-93	17-DEC-93																											
24000-26	Monthly Status Meeting #1	1	24-DEC-93	24-DEC-93																											
24000-28	Monthly Status Meeting #2	1	31-DEC-93	31-DEC-93																											
24000-30	Monthly Status Meeting #3	1	7-JAN-94	7-JAN-94																											
24000-32	Monthly Status Meeting #4	1	14-JAN-94	14-JAN-94																											
24000-34	Monthly Status Meeting #5	1	21-JAN-94	21-JAN-94																											
24000-36	Monthly Status Meeting #6	1	28-JAN-94	28-JAN-94																											
24000-38	Monthly Status Meeting #7	1	4-FEB-94	4-FEB-94																											
24000-40	Monthly Status Meeting #8	1	11-FEB-94	11-FEB-94																											
24000-42	Monthly Status Meeting #9	1	18-FEB-94	18-FEB-94																											
24000-44	Monthly Status Meeting #10	1	25-FEB-94	25-FEB-94																											
24000-46	Monthly Status Meeting #11	1	4-MAR-94	4-MAR-94																											
24000-48	Monthly Status Meeting #12	1	11-MAR-94	11-MAR-94																											
24000-50	Monthly Status Meeting #13	1	18-MAR-94	18-MAR-94																											
24000-52	Monthly Status Meeting #14	1	25-MAR-94	25-MAR-94																											
24000-54	Monthly Status Meeting #15	1	1-JUN-94	1-JUN-94																											
24000-56	Monthly Status Meeting #16	1	8-JUN-94	8-JUN-94																											
24000-58	Monthly Status Meeting #17	1	15-JUN-94	15-JUN-94																											
24000-60	Monthly Status Meeting #18	1	22-JUN-94	22-JUN-94																											
24000-62	Monthly Status Meeting #19	1	29-JUN-94	29-JUN-94																											
24000-64	Monthly Status Meeting #20	1	6-JUL-94	6-JUL-94																											
24000-66	Monthly Status Meeting #21	1	13-JUL-94	13-JUL-94																											
24000-68	Monthly Status Meeting #22	1	20-JUL-94	20-JUL-94																											
24000-70	Monthly Status Meeting #23	1	27-JUL-94	27-JUL-94																											
24000-72	Monthly Status Meeting #24	1	3-JUN-94	3-JUN-94																											
24000-74	Monthly Status Meeting #25	1	10-JUN-94	10-JUN-94																											
24000-76	Monthly Status Meeting #26	1	17-JUN-94	17-JUN-94																											
24000-78	Monthly Status Meeting #27	1	24-JUN-94	24-JUN-94																											
24000-80	Monthly Status Meeting #28	1	1-JUL-94	1-JUL-94																											
24000-82	Monthly Status Meeting #29	1	8-JUL-94	8-JUL-94																											
24000-84	Monthly Status Meeting #30	1	15-JUL-94	15-JUL-94																											
24000-86	Monthly Status Meeting #31	1	22-JUL-94	22-JUL-94																											
24000-88	Monthly Status Meeting #32	1	29-JUL-94	29-JUL-94																											
24000-90	Monthly Status Meeting #33	1	5-AUG-94	5-AUG-94																											
24000-92	Monthly Status Meeting #34	1	12-AUG-94	12-AUG-94																											
24000-94	Monthly Status Meeting #35	1	19-AUG-94	19-AUG-94																											
24000-96	Monthly Status Meeting #36	1	26-AUG-94	26-AUG-94																											
24000-98	Monthly Status Meeting #37	1	2-SEP-94	2-SEP-94																											
24000-100	Monthly Status Meeting #38	1	9-SEP-94	9-SEP-94																											
24000-102	Monthly Status Meeting #39	1	16-SEP-94	16-SEP-94																											
24000-104	Monthly Status Meeting #40	1	23-SEP-9																												